

Appl. No.: 10/629,887

Docket No.: DB000974-001

Response and Amendment dated: 26 July 2005

Reply to Office action of 26 April 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A device, comprising:

a housing; and

a lower plurality of blades cooperating to define an exit aperture from said housing, said lower plurality of blades carried within said housing in a movable manner with respect to one another so as to enable the size of said exit aperture to be varied for singulating articles falling through said exit aperture.

2. (original) The device of claim 1 additionally comprising identification information carried by said device.

3. (original) The device of claim 2 wherein said identification information includes one of an RF tag, bar code, and human readable text.

4. (original) The device of claim 1 additionally comprising a metering device carried within said housing and controlling an entry aperture into said housing.

5. (original) The device of claim 4 wherein a center of said entry aperture and a center of said exit aperture are offset from one another.

6. (original) The device of claim 4 additionally comprising a separation device positioned between said entry aperture and said exit aperture.

7. (original) The device of claim 6 wherein said separation device includes a guide.

8. (withdrawn) The device of claim 6 wherein said separation device includes a slide.

9. (original) The device of claim 4 wherein said metering device includes a valve.

10. (original) The device of claim 4 wherein said metering device includes an upper plurality of blades carried within said housing and defining said entry aperture.

11. (original) The device of claim 10 wherein one of said lower plurality of blades and said upper plurality of blades includes a pair of blades each having an opening formed therein, and wherein one of said apertures is formed by the cooperation of said openings in each of said blades.

12. (original) The device of claim 10 wherein one of said lower plurality of blades and said upper plurality of blades includes a plurality of blades forming an iris.

13. (original) The device of claim 10 wherein one of said lower plurality of blades and said upper plurality of blades is carried by said housing at an angle with respect to a horizontal.

14. (original) The device of claim 10 wherein one of said lower plurality of blades and said upper plurality of blades is configured to define one of a circular aperture and an elliptical aperture.
15. (original) The device of claim 10 wherein one blade of one of said lower plurality of blades and said upper plurality of blades has a circular opening therein and another blade of said one of said lower plurality of blades and said upper plurality of blades has one of a semi-circular opening and a circular opening therein.
16. (original) The device of claim 10 wherein certain blades of one of said lower plurality of blades and said upper plurality of blades have friction increasing structures added to a surface thereof.
17. (original) A singulating device, comprising:
 - a housing having an entry aperture and an exit aperture;
 - a metering device carried by said housing and controlling said entry aperture; and
 - a lower blade carried within said housing and set off from said upper metering device to define a chamber there between, said lower blade controlling said exit aperture.
18. (original) The device of claim 17 additionally comprising identification information carried by said device.
19. (original) The device of claim 18 wherein said identification information includes one of an RF tag, bar code, and human readable text.
20. (original) The device of claim 17 wherein a center of said entry aperture and a center of said exit aperture are offset from one another.
21. (original) The device of claim 17 additionally comprising a separation device positioned between said entry aperture and said exit aperture.
22. (original) The device of claim 21 wherein said separation device includes a guide.
23. (withdrawn) The device of claim 21 wherein said separation device includes a slide.
24. (original) The device of claim 17 wherein said metering device includes a valve.
25. (original) The device of claim 17 additionally comprising a first plurality of lower blades.
26. (original) The device of claim 17 wherein said metering device includes an upper plurality of blades.
27. (original) The device of either claim 25 or claim 26 wherein one of said upper plurality of blades and said lower plurality of blades includes a pair of blades each having an opening formed therein, and wherein one of said apertures is formed by the cooperation of said openings in each of said blades.
28. (original) The device of either claim 25 or claim 26 wherein one of said upper plurality of blades and said lower plurality of blades includes a plurality of blades forming an iris.

29. (original) The device of either claim 25 or claim 26 wherein one of said upper plurality of blades and said lower plurality of blades is carried by said housing at an angle with respect to a horizontal.

30. (original) The device of either claim 25 or claim 26 wherein one of said upper plurality of blades and said lower plurality of blades is configured to define one of a circular aperture and an elliptical aperture.

31. (original) The device of either claim 25 or claim 26 wherein one blade of one of said upper plurality of blades and said lower plurality of blades has a circular opening therein and another blade of one of said upper plurality of blades and said lower plurality of blades has one of a semi-circular opening and a circular opening therein.

32. (original) The device of either claim 25 or claim 26 wherein certain blades of one of said upper plurality of blades and said lower plurality of blades have friction increasing structures added to a surface thereof.

33. (original) The device of claim 17 additionally comprising a sensor for producing a signal for controlling said metering device.

34. (original) The device of claim 17 additionally comprising a first plurality of lower blades and wherein said metering device includes an upper plurality of blades.

35. (original) The device of either claim 10 or claim 34 additionally comprising:

a set of teeth formed in a portion of each of the blades comprising said upper plurality of blades;
an upper drive pinion rotatably supported by said housing and positioned between said teeth of said upper plurality of blades;

a set of teeth formed in a portion of each of the blades comprising said lower plurality of blades;
and

a lower drive pinion rotatably supported by said housing and positioned between said teeth of said lower plurality of blades.

36. (original) The device of either claim 1 or claim 17 wherein said housing defines an upper end, said upper end adapted to receive an article storage container.

37. (original) The device of claim 36 wherein said housing carries a device responsive to the presence and absence of a container attached to said upper end of said housing.

38. (original) The device of either claim 1 or claim 17 additionally comprising a memory device carried by said housing, said memory device for storing information.

39. (original) The device of claim 38 wherein said information includes a bit that is set to a first state when an article storage container is connected to said device and is set to a second state when said article storage container is detached from said device.

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40. (original) The device of claim 38 wherein said information includes information associating said device with a specific article storage container.

41. (original) The device of claim 38 wherein said information includes information about one of the device or product in a storage container associated with the device.

42. (original) The device of claim 38 additionally comprising a clock carried by said housing, said clock providing timing information.

43. (original) The device of either claim 1 or claim 17 additionally comprising one of a global positioning system and an annunciator for identifying a location of the device.

44. (original) The device of claim 17 additionally comprising an actuator for actuating said metering device and said lower blades such that when said entry aperture is open, said exit aperture is closed, and when said exit aperture is open, said entry aperture is closed.

45. (original) The device of either claim 4 or claim 17 additionally comprising a sensor positioned between said entry aperture and said exit aperture for producing a signal representative of one of the number, the identity, the orientation, and the condition of articles.

46 - 73 (canceled)